

Chapter Six FINANCIAL PLAN

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FINANCIAL PLAN



The successful implementation of the Williams Gateway Airport Master Plan will require sound judgement on the part of the Williams Gateway Airport Authority (WGAA). Among the more important factors influencing decisions to carry out a recommendation are timing and airport activity. Both of these factors should be used as references in plan implementation.

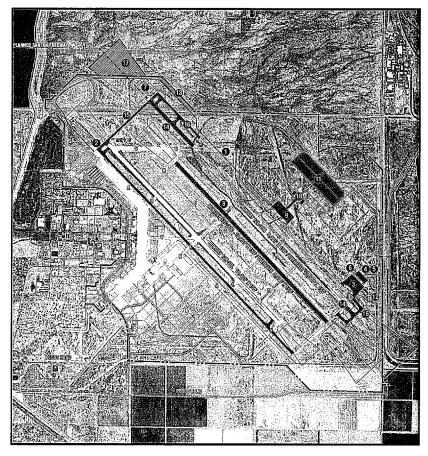
Experience has indicated that major problems have materialized from planning documents which are not demand-based. These problems center

around the plan's inflexibility and inherent inability to deal with new issues that develop from unforeseen changes that may occur after it is completed. The demandbased format used in the development of this master plan has attempted to deal with this issue.

While it is necessary for scheduling and budgeting purposes to consider the timing of airport development, the actual need for facilities is established by airport activity. Proper master planning implementation suggests the use of airport activity levels rather than

time as guidance for development. Tracking airport activity levels and then comparing these to forecast activity levels and facility requirements provides decision-makers with the ability to anticipate and plan for actual facility needs.

The presentation of the financial plan has been organized into two sections. First, the airport development schedule is presented in narrative and graphic form. Second, airport improvement funding sources on the federal, state, and local levels are identified and discussed.



AIRPORT DEVELOPMENT SCHEDULE AND COST SUMMARIES

Once the specific needsimprovements for the airport have been established, the next step is to determine a realistic schedule and costs for implementing the plan. The airport development schedule presented in this chapter outlines the costs for each recommended project, the timing for implementation, and estimates federal and state funding eligibility for each airport improvement project as well as the local share costs for completing the recommended improvements. program outlined on the following pages has been evaluated from a variety of perspectives and represents culmination of a comparative analysis of basic budget factors, demand, and priority assignments.

Individual project cost estimates were increased by 30 percent to account for engineering and other contingencies that may be experienced during the implementation of the project and are in current (1998) dollars. Due to the conceptual nature of a master plan, implementation of capital improvement

projects should occur only after further refinement of their design and costs through engineering and/or architectural analyses. Capital costs in this chapter should be viewed only as estimates subject to further refinement during design. Nevertheless, these estimates are considered sufficient for performing the feasibility analyses in this chapter.

Since forecast demand and operational issues can change, frequently on short notice. the airport development schedule has been divided into planning horizons, reflecting short term (0-5 years), intermediate term (6-10 years). and long term (11-20 years) goals and needs. Planning horizons are intended to reflect the fact that many future improvements for the airport are demand-based, rather than time-based. and that the actual need to improve facilities will be linked to specific activity levels. The airport development schedule should be viewed as a fluid document which can be modified to reflect actual airport activity needs. Table 6A summarizes the key activity milestones for each planning period.

TABLE 6A Planning Horizon Activity I	∠evels			
	1998	Short Term Planning Horizon	Intermediate Term Planning Horizon	Long Term Planning Horizon
Enplanements Enplaned Air Cargo (pounds)	0 1 42, 891	250,000 12,340,000	650,000 16,450,000	2,000,000 24,670,000
Based Aircraft	54	100	135	24,670,000
Annual Operations	195,802	232,400	261,500	338,200

The short-term planning period covers items of highest priority. Because of their priority, these are the only items scheduled year-by-year so as to be easily incorporated into local, State, and FAA programming. When short term planning horizon activity levels are reached, it will be time to program for the intermediate term based upon the

next level of projected activity. Similarly, when these activity levels are reached, it will be time to program for long term activity levels.

The following sections describe each planning horizon in more detail. **Table 6B** summarizes total development costs by planning horizon.

TABLE 6B Summary of Total Developm	ent Costs			
	Total Cost	Federally Eligible	State Eligible	Local Share
Short Term Planning Horizon Intermediate Term	\$120,226,145	\$106,373,183	\$6,059,868	\$7,793,093
Planning Horizon	90,871,600	50,035,863	6,420,069	34,415,669
Long Term Planning Horizon	100,975,000	60,005,162	11,199,419	29,770,419
Total Development	\$312,072,745	\$216,414,208	\$23,679,356	\$71,979,181

SHORT TERM PLANNING HORIZON IMPROVEMENTS

As indicated above, the short term planning horizon is thedevelopment stage that is correlated to time due to development within this initial period being concentrated on the most immediate needs of the airport. Therefore, the program is presented year-by-year to assist in capital improvement programming. The short term planning horizon outlines the anticipated capital needs of the airport over the next seven fiscal years (FY 1999 to FY 2005). Short term planning horizon improvements are estimated to cost approximately \$120.2 million and are summarized in Table 6C. short term planning horizon includes the following:

Airfield Pavement: A primary focus of the short term planning horizon is reconstructing existing runway and taxiway pavement areas constructing new taxiways to enhance the efficiency of airfield movements. During the short term planning period, the reconstruction of Runway 12L-30R, which will serve as the primary heavy aircraft runway, will be completed. This includes the construction of parallel Taxiway C along the east side of the runway. Existing Taxiways H, M, V, K, N, and P are planned to be reconstructed. Taxiways H, M, J, L, and T are also planned to be extended from Runway 12R-30L to Runway 12L-30R. This will connect all the runways and provide access to each side of the airfield. Taxiway T is also planned for construction. Taxiway T will extend

Airport Development Schedule **Short Term Planning Horizon** Total **Federally** State Local Share Description Cost Eligible Eligible Fiscal Year 1999 Rehabilitate/Reconstruct Taxiway A \$2,500,000 \$122,721 \$122,721 \$2,745,445 Extension Terminal Building Rehabilitation/ 2,500,000 1,000,000 4,500,000 1,000,000 Reconstruction 318,710 Cargo Apron Design 350,000 15,645 15,645 3. 450,000 409,770 20,115 20,115 4. Access Road Design 750,000 682,950 67,050 5. Acquire ARFF Vehicle 0 Acquire High Speed Runway Sweeper 125,000 113,825 0 11,175 6. 7. 800,000 728,480 35,760 35,760 Land Easement Acquisitions – 84 acres Drainage/Erosion Control 200,000 182,120 8,940 8,940 \$9,920,445 \$7,435,855 \$1,203,181 \$1,281,406 Subtotal Fiscal Year 1999 Fiscal Year 2000 \$252,555 \$252,555 Cargo Apron Construction \$5,650,000 \$5,144,890 158,685 2. Access Road Construction 3,550,000 3,232,630 158,685 5,000,000 223,500 223,500 3. **Drainage Improvements** 4,553,000 Rehabilitate/Upgrade Airfield 4. 4,000,000 **Electrical System** 3,642,400 178,800 178,800 Install Tiedowns (90 ea.) 56,500 51,449 2,526 2,526 5. 200,000 182,120 8.940 8,940 Construct Lighted Heliport 6. 400,000 400,000 7. Acquire ARFF Vehicle 0 0 Construct 30 T-hangars 780,000 0 0 780,000 8. 294,000 9. Construct T-hangar Access Taxilanes 294,000 0 0 10. Construct T-hangar Access and Auto 181,000 0 0 181,000 Parking \$20,111,500 Subtotal Fiscal Year 2000 \$16,806,489 \$825,006 \$2,480,006 Fiscal Year 2001 1. Reconstruct/Extension of Taxiway H \$6,000,000 \$5,463,600 \$268,200 \$268,200 and M to Runway 12L-30R 2. East Terminal Area Infrastructure Design/Construction Documents 3,150,000 2,868,390 140,805 140,805 Drainage/Erosion Control 200,000 182,120 8,940 8,940 \$417,945 **Subtotal Fiscal Year 2001** \$9,350,000 \$8,514,110 \$417,945 Fiscal Year 2002 Construct Taxiway C (Completion) \$277,140 \$277,140 1. \$6,200,000 \$5,645,720 2. ASR Relocation Design and Construction 1,000,000 910,600 44,700 44,700 East Side Terminal Area Infrastructure Construction 45,000,000 40,977,000 2,011,500 2,011,500 Drainage/Erosion Control 8,940 200,000 182,120 8,940 **Subtotal Fiscal Year 2002** \$52,400,000 \$47,715,440 \$2,342,280 \$2,342,280

TABLE 6C

TABLE 6C (Continued)
Airport Development Schedule
Short Term Planning Horizon

	Description	Total Cost	Federally Eligible	State Eligible	Local Share
Fis	scal Year 2003				
1. 2.	Reconstruct Taxiways V and K Drainage/Erosion Control	\$12,844,200 200,000	\$11,695,929 182,120	\$574,136 8,940	\$574,136 8,940
Su	btotal Fiscal Year 2003	\$13,044,200	\$11,878,049	\$583,076	\$583,076
Fis	scal Year 2004				
1. 2.	Reconstruct Taxiways N and P Drainage/Erosion Control	\$6,000,000 200,000	\$5,463,600 182,120	\$268,200 8,940	\$268,200 8,940
Su	btotal Fiscal Year 2004	\$6,200,000	\$5,645,720	\$277,140	\$277,140
Fis	scal Year 2005				
1. 2.	Construct Taxiway Extensions J, L, & T Drainage/Erosion Control	\$9,000,000 200,000	\$8,195,400 182,120	\$402,300 8,940	\$402,300 8,940
Sul	btotal Fiscal Year 2005	\$9,200,000	\$8,377,520	\$411,240	\$411,240
Tot	tal Short Term Planning Horizon	\$120,226,143	\$106,373,183	\$6,059,868	\$7,793,093

from Taxiway A and provide direct access to the south apron area. Taxiway A is situated along the west side of Runway 12R-30L and includes two partial taxiway segments. Included in the short term planning horizon is a project to connect the partial taxiway segments to provide access the fulllength of Runway 12R-30L. pavement improvements include constructing an apron area along Taxiway K to initially serve air cargo activity and constructing a lighted heliport to provide an area for helicopters to land and depart which is segregated from fixed wing aircraft.

Drainage Improvements: The drainage improvements included in the short term planning horizon are intended to improve the airport's

stormwater collection system. The proposed drainage improvements include constructing detention basins, storm drains, and open channels along the airfield and west apron areas to collect and distribute stormwater.

Terminal Improvements: The primary terminal improvements included in the short term planning horizon include completing the renovation of Building 15 to initially serve passenger terminal activities. In addition, infrastructure improvements will be completed on the east side of the airport for the development of the future passenger terminal facilities. Infrastructure improvements include extending utility lines and constructing primary access roads. To provide for terminal development near the

midpoint of Runway 12L-30R, the existing airport surveillance radar is planned to be relocated along the northern airport boundary.

Equipment: The acquisition of two aircraft rescue and firefighting (ARFF) vehicles and a high speed runway sweeper are programmed for the short term planning horizon. The high speed runway sweeper is intended to maintain the airfield pavement areas free of dirt and debris. The ARFF vehicle acquisitions are intended to increase the airport's ARFF index rating as required by federal regulations. The first vehicle purchase (programmed for FY 1999) will ensure that the airport meets the requirements of ARFF Index C. The second ARFF vehicle should enable the airport to meet the requirements of ARFF Index B.

Other Other Improvements: improvements programmed for the short term planning horizon include constructing 30 T-hangars, installing 90 aircraft tiedowns, acquiring land easements, rehabilitating the airfield electrical systems, relocation of the rotating beacon, and replacing the airport traffic control tower console. The T-hangars are planned to be developed along the west side of the north apron. Related improvements include constructing access taxiways, an automobile parking lot, and access road. The acquisition of avigation easements is programmed to protect the future runway protection zone to Runway 30R which extends over the General Motors proving grounds east of Ellsworth Road. The planned improvements to the airfield electrical system include upgrading existing electrical service

lines, replacing existing cabling, and rehabilitating the electrical vaults which supply power to airfield lighting systems.

Exhibit 6A provides a graphical depiction of the primary airfield and landside improvements programmed for the short term planning horizon.

INTERMEDIATE TERM PLANNING HORIZON

The intermediate term planning horizon encompasses development to accommodate forecast increases in aviation demand. Table 6D summarizes intermediate term development.

As enplanement levels grow to forecast intermediate term levels, it will be necessary to develop a passenger terminal on the east side of the airport to efficiently accommodate air carrier service and replace the interim terminal building on the west side of the airport. To accommodate air carrier activity on the east side of the airport, the intermediate term planning horizon includes provisions for developing an air carrier apron, terminal building, and automobile parking areas. It is anticipated that the majority of the access roads and utility lines will have been completed during the short term planning horizon. Related improvements include constructing security fencing along the east side of the airport to meet federal security guidelines, and constructing a fuel farm to serve air carrier aircraft fueling needs. The development of a perimeter

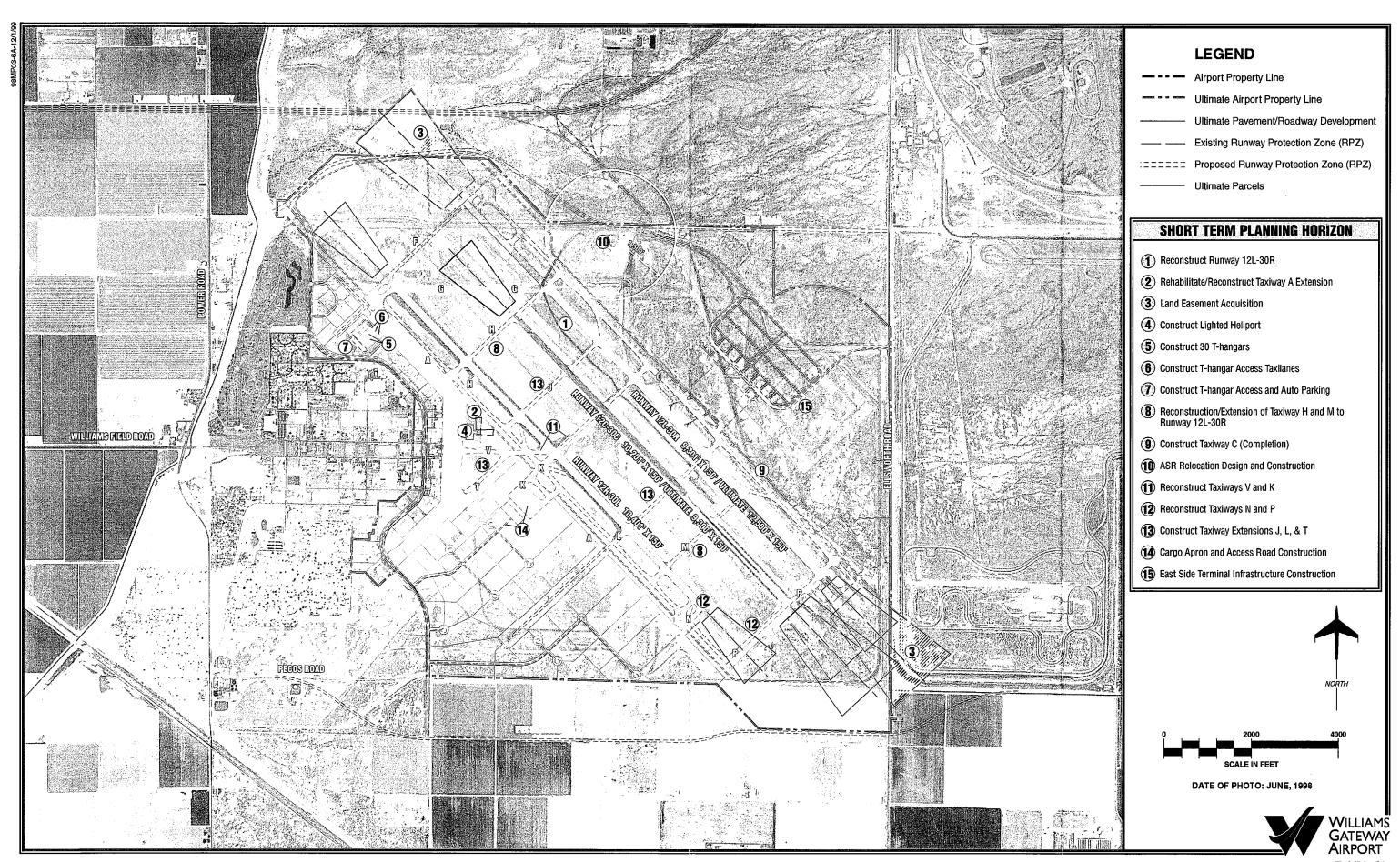


TABLE 6D Airport Development Schedule Intermediate Term Planning Horizon

	Description	Total Cost	Federally Eligible	State Eligible	Local Share
1.	Utility Extensions and Access Roads		,		
_	(South Tract)	\$4,000,000	\$3,642,400	\$178,800	\$178,800
2.	Construct Passenger Terminal Building Apron (82,200 s.y.)	8,020,000	7,303,012	250 404	050 404
3.	Construct Passenger Terminal Building	0,020,000	7,303,012	358,494	358,494
0.	(159,000 s.f.)	31,010,000	15,505,000	0	15,505,000
4.	Construct Passenger Terminal Building	52,523,555	10,000,000	Ů	10,000,000
	Automobile Parking (5,000 spaces)	7,590,000	0	0	7,590,000
5.	Construct Terminal Fuel Storage				, ,
	(100,000 gallons Jet A) - East Side	910,000	0	0	910,000
6.	Install Security Fencing and Gates				
_	(East Side)	358,000	325,995	16,003	16,003
7.	Relocate ILS to Runway 30R	200,000	182,120	8,940	8,940
8. 9.	Install MALSR Runway 30R Construct Perimeter Service Road	350,000	318,710	15,645	15,645
9.	(Phase I)	733,000	667,470	32,765	32,765
10	Fire Protection Upgrades (Phase I)	7,500,000	007,470	32,760 0	7,500,000
11.	Reconstruct Runway 12R-30L	16,900,000	15,389,140	755,430	755,430
12.	<u>-</u>	520,000	0	0	520,000
13.	Construct T-hangar Access Taxilanes	270,000	245,862	12,069	12,069
14.	<u> </u>	95,600	0	0	95,600
15.	Reconstruction North Apron				ŕ
	(90,200 s.y.)	5,300,000	4,826,180	236,910	236,910
16.	• • • • • • • • • • • • • • • • • • • •				
	30L,30R	260,000	236,756	11,622	11,622
17.					
10	12R-30L	780,000	710,268	34,866	34,866
18.		050 000		005 000	0,500
19.	Facility Expand 100LL Fuel Storage	250,000	0	225,000	25,000
IJ.	(15,000 gal.)	75,000	0	0	75,000
20.	Acquire ARFF Vehicle(s)	750,000 750,000	682,950	33,525	33,525
21.	Pavement Preservation	5,000,000	002,550	4,500,000	500,000
	17.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,
	al Intermediate Term	400 OF 4 000	## 0.00#.000	40.400.000	404 47 7 77
Pla	anning Horizon	\$90,871,600	\$50,035,863	\$6,420,069	\$34,415,669

service road is anticipated to allow for emergency and maintenance vehicles to access this side of the airport without crossing the runway system.

Primary airfield improvements include relocating the instrument landing system (ILS) installed at the Runway 30C end to Runway 30R, installing precision approach path indicators (PAPIs) at each end of Runway 12L-30R and Runway 12R-30L and constructing high speed exits along Runway 12R-30L. The ILS is programmed to be relocated to Runway 30R to position the ILS approach along the primary runway serving air carrier activity. The installation of a medium intensity approach lighting system with runway alignment lighting (MALSR) to the

Runway 30R end is intended to provide ½ mile visibility minimum approaches to this runway end. The PAPIs will aid pilots in determining the correct descent path to each runway end. High speed exits are planned for development along the midpoint of Runway 12R-30R to aid aircraft in quickly exiting the runway. This improves airfield capacity by allowing for aircraft to exit the runway at higher speeds than can be achieved with right-angled exits.

The reconstruction of Runway 12R-30L and the north apron are programmed for the intermediate term planning horizon. Runway 12R-30L will be reconstructed to provide similar pavement strengths to Runway 12L-30R. This maximizes airfield capacity providing for simultaneous approaches to the airport for all aircraft expected to operate at the airport and provides an alternative landing area should Runway 12L-30R be closed for maintenance or emergency reasons. The north apron is programmed to be reconstructed to provide additional pavement strength and replace existing aging pavement.

The intermediate term planning horizon also includes providing \$1.0 million annually for pavement preservation activities. Pavement preservation typically includes applying a slurry seal to existing pavement surfaces, crack sealing, and/or small pavement repairs. This item is not specifically defined at this time. Future pavement preservation activities will require following a specific pavement maintenance program.

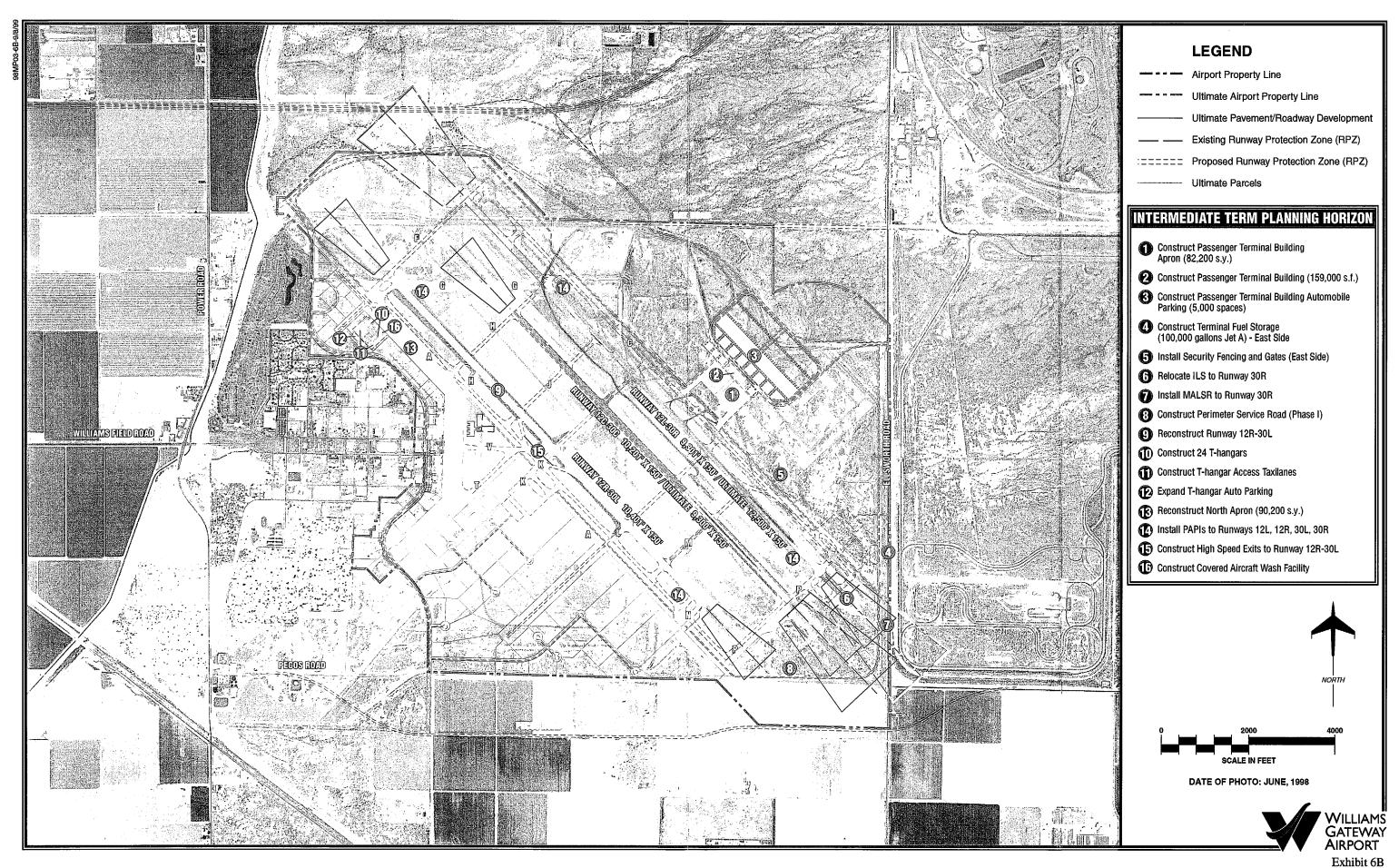
The construction of 24 T-hangars is programmed to provide additional aircraft storage hangars for anticipated growth in based aircraft. To construct these T-hangars, it will be necessary to construct additional T-hangar access taxilanes and expand the automobile parking area which will be initially developed in the short term planning horizon. The development of a covered aircraft wash facility is programmed for this planning period to provide an area for the proper disposal of aircraft cleaning fluids and wastewater as well as providing an area for aircraft owners complete minor maintenance activities.

Additional projects included in this planning horizon include expanding 100LL fuel storage, completing fire protection upgrades, and a provision for the acquisition of additional ARFF vehicles as needed. The fire protection upgrades are anticipated due to low pressure and water volumes at the airport site. While not specifically defined at this time, future fire protection upgrades are anticipated to include the installation of additional water lines and potentially large storage tanks to provide sufficient water volume to meet structural fire code requirements.

Exhibit 6B provides a graphical depiction of the primary airfield and landside improvements programmed for the short term planning horizon.

LONG TERM PLANNING HORIZON

By the end of the long term planning horizon, the airport is expected to serve



2,000,000 annual passenger enplanements and an annual traffic volume of over 338,000 annual operations. Improvements over the long term planning horizon are designed to keep the airport in pace with projected passenger and operational needs. **Table 6E** summarizes long term planning horizon improvements.

TABLE 6E Airport Development Schedule Long Term Planning Horizon

Dong Term Training Notizon					
Description	Total Cost	Federally Eligible	State Eligible	Local Share	
Description	Cost	Eligible	Eligible	Snare	
1. Construct Perimeter Service Road					
(Phase II)	\$765,000	\$696,609	\$34,196	\$34,196	
2. Relocate Taxiway A	9,650,000	8,787,290	431,355	431,355	
3. Construct East Cargo Apron			•	,	
(49,200 s.y.)	4,800,000	4,370,880	214,560	214,560	
4. Extend Utilities to East		·	·		
Cargo Apron	103,000	93,792	4,604	4,604	
5. Construct East Cargo		·	•	-	
Apron Access Road	86,000	78,312	3,844	3,844	
6. Construct East Cargo Apron Truck					
Court and Auto Parking	556,000	0	0	556,000	
7. Fire Protection Upgrades (Phase II)	7,500,000	0	0	7,500,000	
8. Install MALSR Runway 12L	350,000	318,710	15,645	15,645	
9. Reconstruct Runway 12C-30C	15,000,000	13,659,000	670,500	670,500	
10. Expand Passenger Terminal					
Building Apron (57,000 s.y.)	5,600,000	5,099,360	250,320	250,320	
11. Expand Passenger Terminal					
Building (120,100 s.f.)	23,400,000	11,700,000	0	11,700,000	
12. Expand Passenger Terminal					
Building Auto Parking					
(3,675 spaces)	5,600,000	0	0	5,600,000	
13. Expand Jet A Fuel Storage					
(125,000 gal.)	1,140,000	0	0	1,140,000	
14. Expand 100LL Fuel Storage					
(15,000 gal.)	75,000	0	0	75,000	
15. Relocate Powerline Floodway	2,000,000	1,821,200	89,400	89,400	
16. Extend Runway 12L-30R					
to 12,500 feet	5,200,000	4,735,120	232,440	232,440	
17. Construct Taxiway F	2,300,000	2,094,380	102,810	102,810	
18. Extend Taxiway C	2,600,000	2,367,560	116,220	116,220	
19. Construct Airport					
Traffic Control Tower	3,500,000	3,500,000	0	0	
20. Acquire ARFF Vehicle(s)	750,000	682,950	33,525	33,525	
21. Pavement Preservation	10,000,000	0	9,000,000	1,000,000	
Total Long Term Planning Horizon	\$100,975,000	\$60,005,162	\$11,199,419	\$29,770,419	

To provide additional airport capacity, especially during peak periods, the center runway is planned to be

reconstructed to accommodate all but the largest aircraft expected to operate at the airport. Anticipated passenger growth is expected to be accommodated through expansion of the east terminal building, apron, parking areas, and fuel storage areas (which is anticipated to be initially constructed in the intermediate term planning horizon).

The development of the east cargo area is programmed for this planning period. The east cargo apron is intended to provide a segregated area for both dedicated air cargo and air carrier needs. This location will also provide better roadway access than the area initially developed on the west side of the airport, by providing direct access to Ellsworth Road. The development of area includes east cargo constructing the cargo apron, access road, parking areas, and utility extensions.

The runway length evaluation in Chapter Three determined that an ultimate runway length of 12,500 feet may be needed to provide sufficient length for typical air carrier and air cargo aircraft departure requirements. To provide this additional length, Runway 12L-30R is programmed to be extended 2,650 feet north and 550 feet south during the long term planning horizon. Runway 12L-30R was selected to accommodate the extension since this runway is located near the future passenger terminal and air cargo areas. Prior to extending Runway 12L to the north, the Powerline Floodway must be relocated. As planned, the Powerline Floodway would be relocated along the eastern boundary of the airport and drain to the north into a floodway planned along the San Tan Freeway. Related taxiway improvements, include extending Taxiway C to each end of

Runway 12L-30R and constructing Taxiway F to provide access to the Runway 12L end from the west side of the airfield. The acquisition of land easements is programmed to protect the portions of the Runway 12L runway protection zone which extend outside the existing airport boundary.

The installation of a MALSR is included in the long term planning horizon. This will enable the establishment of a ½ mile visibility minimum Global Positioning approach to Runway 12L to complement the similar approach which will be available at the Runway 30C end.

Other airfield projects include constructing a perimeter service road around the north half of the airfield and relocating Taxiway A to the east. The relocation of Taxiway A to a runway/taxiway separation distance of 450 feet is planned to provide additional area for development along the southern half of this taxiway while providing for the full use of the north apron area. Presently, Taxiway A extends along the western edge of the north apron area.

The long term planning horizon includes provisions for the replacement of the airport traffic control tower in its existing location as the existing tower is expected to exceed its useful life during this planning horizon. Additional projects include continuing annual pavement preservation and maintenance projects and fire protection upgrades. Similar to the intermediate planning horizon, \$1.0 million has been programmed for pavement preservation projects annually, while \$7.5 million

has been allocated for fire protection upgrades.

Exhibit 6C provides a graphical depiction of the primary airfield and landside improvements programmed for the long term planning horizon.

AIRPORT DEVELOPMENT AND FUNDING SOURCES

Financing future airport improvements will not rely exclusively upon the financial resources of the WGAA. Airport improvement funding assistance is available through various grant-in-aid programs at both the state and federal levels. The following discussion outlines the key sources for airport improvement funding and how they can contribute to the successful implementation of this master plan.

FEDERAL AID TO AIRPORTS

The United States Congress has long recognized the need to develop and maintain a system of aviation facilities across the nation for national defense and promotion of interstate commerce. Various grant-in-aid programs to public airports have been established over the years for this purpose. The current federal grant-in-aid program is the Airport Improvement Program (AIP) established in 1982. AIP has been reauthorized several times since 1982, however, the authorized spending levels have varied annually.

The most recent reauthorization for the AIP was included in the Fiscal Year (FY)99 Omnibus Appropriations Act

which appropriated \$975 million for the AIP through March 31, 1999 - half of the \$1.95 billion obligational authority for the year. Congress failed to pass a full year reauthorization of the AIP due to conflicts surrounding capacity "slot" allotments at four major airports and existing service rules at Washington Dulles International Airport. Congress authorized the full FY99 AIP funding in September 1999.

The funding levels authorized in the legislation are not always the levels appropriated in the annual Congressional budget process. In fiscal year 1996, the AIP authorized level was \$2.161 billion, but only \$1.45 billion was appropriated. Only \$1.46 billion of the authorized \$2.28 billion was appropriated in 1997. For fiscal year 1998, \$1.7 billion of the authorized \$2.347 billion was appropriated.

The source for AIP funds is the Aviation Trust Fund. The Aviation Trust Fund was established in 1970 to provide funding for aviation capital investment programs (e.g., facilities and equipment, research and development, and grants for airport development and expansion projects). A majority of the FAA's operations account is financed through the Aviation Trust Fund. The Aviation Trust Fund is funded by federal user fees and taxes on airline tickets, aviation fuel, and various aircraft parts.

AIP funds are distributed each year by the FAA under authorization from the United States Congress. A portion of each year's authorized level of AIP funding is distributed to all eligible commercial service airports through an entitlement program that guarantees a minimum level of federal assistance each year. These dollars are calculated based upon enplanement and cargo service levels.

Passenger entitlement funding for commercial service airports determined using the following formula. For the first 50,000 enplanements, the airport receives \$7.80 per enplanement. For the next 50,000 enplanements, the airport receives \$5.20 per enplanement. For the next 400,000 enplanements, the airport receives \$2.60 per enplanement. For all other enplanements over 500,000, the airport receives \$0.65 per enplanement. Table 6F summarizes potential future entitlement funds for Williams Gateway Airport based upon forecast annual enplanements.

Cargo entitlements are based upon the total annual all-cargo aircraft landed weight at the airport. To be eligible for cargo entitlements, an airport must have over 100 million pounds of landed annually. weight The actual entitlement dollars are based upon the airport's percentage of the total landed weights of all eligible airports, with no airport receiving greater than 8 percent of the total annual cargo entitlement. For 1997, \$39,100,000 was authorized for cargo entitlements and 102 airports qualified for cargo entitlements ranging from \$39,908 to \$3,128,00. In general, an airport which is served by two Boeing 727-200 aircraft five days a week each year can qualify for a cargo entitlement. Williams Gateway Airport is not anticipated to qualify for air cargo entitlements. Long term cargo activity is projected at 24 million pounds per year, only one-quarter of the minimum

amount needed to qualify for cargo entitlement dollars.

The remaining AIP funds are distributed by the FAA to airports based upon the priority of the project for which they have requested Federal assistance through federal discretionary apportionments. A National Priority Ranking System is used to evaluate and rank each airport project. Those projects with the highest priority are given preference in receiving discretionary funding.

Much of the discretionary apportionment is required to be allocated for specific types of airports and/or airport There are five specially legislated funding categories or "setasides" for federal discretionary funding. The specific set-asides include: reliever airports, nonprimary commercial service airports (airports enplaning less than 10,000 passengers annually), noise compatibility planning and programs, integrated airport systems plans, and the military airport program. The FAA distributes funding from both set-aside funds and general discretionary funds at their discretion. The important point to remember is that the Williams Gateway Airport can qualify for both discretionary and setaside funds.

As is evident from the airport development schedule cost summaries, potential entitlement funds will not be sufficient to fund future airport development needs. Therefore, the WGAA will rely on federal discretionary funding to implement many of the development needs for the airport. An

important point to consider is that, unlike entitlement dollars, federal

discretionary funding is not guaranteed each year for an airport.

TABLE 6F Potential Annual Entitlement and Passenger Facility Charges

Year	Projected Enplanements	Potential Entitlements	Potential PFCs ¹
Short Term Planning Horizon	250,000	\$715,000	\$657,000
Intermediate Term Planning Horizon	650,000	\$1,664,000	\$1,708,000
Long Term Planning Horizon	2,000,000	\$2,457,000	\$5,256,000

PFC - Passenger Facility Charge

The federal participation in airport development projects varies according to the size and role of the airport. The FAA has established the following categories of airports: general aviation, non-hub, small hub, medium hub, and Hub classifications are large hub. based upon an airport's share of total national passenger enplanements. Airports enplaning less than 0.05 percent of all enplanements nationwide are considered non-hub airports. Small hub airports enplane between 0.05 and 0.24 of national enplanements. Medium hub airports enplane between 0.25 and 0.99 percent of national enplanements. while large hub airports enplane 1 percent or more of total national enplanements.

Presently, Williams Gateway Airport is considered a general aviation airport for federal funding purposes. As air carrier service is established at the airport, the airport's classification for federal funding will change. At the enplanement levels projected for the short-term planning period (250,000 annual enplanements), Williams Gateway Airport would be considered a non-hub airport. At intermediate term planning horizon enplanement levels (650,000 annual enplanements), Williams Gateway Airport would be considered a small hub airport. At long term planning horizon enplanement (2,000,000)passenger enplanements), the airport would be considered a medium hub airport.

In Arizona, airport development projects for general aviation, non-hub, and small hub airports that meet FAA's eligibility requirements receive 91.06 percent funding from the AIP. Medium hub airports receive 75 percent funding from the AIP. Eligible projects include any public use facility such as airfield and apron improvements. Revenue generating improvements such as fuel

¹ Assumes a maximum \$3.00 PFC, 90 percent revenue passengers, \$0.08 to air carrier for administrative costs

facilities and hangars are generally not eligible for AIP funding. FAA has historically not funded these types of facilities, but they are currently under review by the agency for consideration as an eligible airport improvement in the future.

MILITARY AIRPORT PROGRAM

As discussed, the military airport program (MAP) is a component of the Federal Airport Improvement Program and is a discretionary funding set-aside. The MAP set-aside was established to assist current and former military airports located in congested metropolitan areas in converting to viable civilian airports. Currently, the MAP set-aside is authorized at 4.0 percent of the airport improvement program allocation. For Fiscal Year 1997, the amount was \$18,512,311.

There are three conditions for an airport to be eligible for MAP funds:

- 1) the airport must be a former or current military airport,
- 2) the airport must have the potential for conversion either to a public use commercial service or reliever airport, and
- 3) the conversion of the airport would, in whole or part, enhance airport and air traffic control system capacity in major metropolitan areas and reduce current and projected flight delays.

Airports meeting this criteria are eligible for inclusion in the MAP for five years. Eligible projects include (in addition to other eligible airport

improvement program projects), terminals, fuel farms, utility systems, parking lots, and hangars (which are generally not eligible for AIP funds).

Williams Gateway Airport has participated in the MAP for three years. The MAP has provided much of the federal funding for the reconstruction of Runway 12L-30R. The airport is completing an application for continued participation in the program. Future MAP funding is expected to fund the completion of the reconstruction of Runway 12L-30R, upgrades to the airport traffic control tower console, and air cargo apron construction along Taxiway K.

PASSENGER FACILITY CHARGES

The Aviation Safety and Capacity Expansion Act of 1990 contained a provision for airports to levy passenger facility charges (PFC's) for the purposes of reducing noise impacts or enhancing competition, airport safety, security, or capacity. PFC's may be imposed by public agencies controlling a commercial service airport with at least 2,500 annual passengers and scheduled service. Authorized agencies may impose a charge of \$1.00, \$2.00, or \$3.00 per enplaned passenger.

Prior approval from the Department of Transportation (DOT) is required before an airport is allowed to levy a PFC. DOT must find that the projected revenues are needed for specific, approved projects. Any AIP-eligible project (development or planning) is eligible for PFC funding. Gates and related areas for the movement of

passengers and baggage are eligible as are on-airport ground access projects.

PFC's may be used only on approved projects. However, PFC's can be utilized to fund 100 percent of a project. They may be used as matching funds for AIP grants or to augment AIP-funded projects. PFC's can be used for debt service and financing costs of bonds for eligible airport development. These funds may also be commingled with general revenue for bond debt service. Before submitting a PFC application, the airport must give notice and an opportunity for consultation to airlines operating at the airport.

PFC's are treated similar to other airport improvement grants rather than as airport revenues, and will be administered by the FAA. Large and medium hub airports imposing a PFC are required to forego up to 50 percent of their AIP passenger entitlement. At small and non-hub airports collection of PFC's can be almost wholly retained by the airport for use on approved projects. Participating airlines are able to retain up to eight cents per passenger for administrative handling purposes. Table 6F outlines the potential annual PFC funding that could be attained based upon forecast enplanements.

FAA FACILITIES AND EQUIPMENT PROGRAM

The Airway Facilities Division of the FAA administers the national Facilities and Equipment (F&E) Program. This annual program provides funding for the installation and maintenance of

various navigational aids equipment for the national airspace system and airports. Under the F&E program, funding is provided for FAA air traffic control towers, enroute navigational aids such as VOR's, and on-airport navigational aids such as PAPIs, and approach lighting systems. and other activity levels development warrants, the airport may be considered by the FAA Airways Facilities Division for the installation and maintenance of navigational aids through the F&E program. construction of a new airport traffic control tower to replace the existing tower is expected to be funded through this program.

STATE AID TO AIRPORTS

In support of the state airport system, the State of Arizona also participates in airport improvement projects. The source for State airport improvement funds is the Arizona Aviation Fund. Taxes levied by the State on aviation fuel, flight property, aircraft registration tax, and registration fees, (as well as interest on these funds) are deposited in the Arizona Aviation Fund. The Transportation Board establishes the policies for distribution of these State funds.

Under the State of Arizona grant program, an airport can receive funding for one-half of the local share of projects receiving federal AIP funding. The State also provides 90 percent funding for projects, such as pavement maintenance, which are not eligible for AIP funding.

State Airport Loan Program

The Arizona Department Transportation - Aeronautics Division (ADOT) Airport Loan Program was established to enhance the utilization of State funds and provide a flexible funding mechanism to assist airports in funding improvement projects. Eligible projects include runway, taxiway, and apron improvements; land acquisition, planning studies, the preparation of plans and specifications for airport construction projects, and revenue generating improvements such as hangars and fuel storage facilities. Projects which are not currently eligible for the State Airport Loan Program are considered if the project would enhance the airport's ability to be financially self-sufficient.

There are three ways in which the loan funds can be used: Grant Advance. Matching Funds, or Revenue Generating Projects. The Grant Advance loan funds are provided when the airport can demonstrate the ability to accelerate the development and construction of a multi-phase project. The project(s) must be compatible with the Airport Master Plan and be included in the ADOT 5-year Airport Development Program. The Matching Funds are provided to meet the local matching fund requirement for securing federal airport improvement grants or other federal or state grants. Revenue Generating funds are provided for airport-related construction projects that are not eligible for funding under another program.

LOCAL FUNDING

The balance of project costs, after consideration has been given to grants, must be funded through local resources. There are several alternatives for local finance options for future development at the airport, including airport revenues, bonds, and leasehold financing.

There are several types of revenue bonds, but in general they are a form of municipal bond which is payable solely from the revenue derived from the operation of a facility that was constructed or acquired with the proceeds of the bonds. For example, a Lease Revenue Bond is secured with the income from a lease assigned to the repayment of the bonds. Revenue bonds have become a common form of financing airport improvements. The local share of passenger terminal building development is commonly financed, in part, through revenue bonds.

Leasehold financing refers to a developer or tenant financing improvements under a long-term ground lease. The obvious advantage of such an arrangement is that it relieves the WGAA of all responsibility for raising the capital funds for improvements. Much of the future industrial/commercial development on the airport is expected to be developed in this manner.

Airport Operating Fund

The WGAA operating budget has been reviewed for its ability to contribute to

future capital improvement funding. **Table 6G** summarizes historical revenues and expenditures for the airport from 1996 through 1998, and 1999 budget figures. This information was tabulated from WGAA revenue and expense records.

As shown in the table, the primary revenue categories for the airport are fuel sales and lease income. Lease income includes both land and facility leases. All existing building are leased on the airport. Additional revenue is generated from landing fees itinerant aircraft over 12,500 pounds. This includes, for example, airline flight training activities and aircraft testing and certification activities. Landing fees are not charged for military or general aviation aircraft conducting touch-and-go activities. Landing fees are presently set by the WGAA at \$0.70 per 1,000 pounds maximum gross landed weight. Land leases vary from \$0.18 to \$0.25 per square-foot per year.

The community members of the WGAA contribute substantially to the WGAA operating and capital funds. combined \$4.5 million is contributed to the WGAA each year. As shown in the table, over \$3.0 million of the \$4.5 million has been directed to the operating fund over the past two years. The remaining funds are used for matching funds on capital improvement grants and non-grant capital improvements. As of the end of FY 1998, the members communities have contributed \$15,381,976 to the WGAA. of which \$1,273,050 was contributed by the Gila River Indian Community, \$1,462,750 by the Town of Gilbert, \$282,700 by the Town of Queen Creek, and \$12,363,406 by the City of Mesa. Per the Joint Powers Airport Authority Agreement, all contributions made by the member communities are considered loans to be repaid to the members at such time as the WGAA's board of directors deems appropriate.

Operating expenses include personnel, maintenance, utilities, and administration. Personnel expenses is the largest expense category. As shown, the WGAA has generated an operating profit, which is mostly due to the contributions made by the community members of the WGAA.

Cash Flow Analysis

To determine the net operating income that may be available to amortize capital improvement costs in the future, a Cash Flow Analysis has been prepared by the Williams Gateway Airport Authority. The analysis is based upon revenues, expenditures, funding eligibility, potential debt service, and the remaining local share of capital improvement construction costs. Table 6H summarizes the cash flow analysis for the airport by planning horizon. Appendix D provides the full 20-year cash flow projection prepared by the WGAA and details the cash flow analysis assumptions and worksheets for fuel revenues, cost of sales, staffing, and hangar and tiedown fees.

TABLE 6G					
Statement of Revenues and Expenditures					
		in temperatu			
	1996	1997	1998	1999	
Revenues		4=00 (=0	T 44 4 5 5 4 5		
Fueling Operations	\$0	\$500,479	\$1,160,241	\$2,464,697	
Fuel Flowage & FBO Fees	40,553	14,444			
Landing Fees	156,914	228,553	1		
Lease Income	533,676	641,329			
Contracts and Miscellaneous Services	2,080,468	404,420	311,606	137,304	
Tie Down/ Hangaring Fees	11,827	39,941	,	,	
Direct Local Government Contributions	2,917,820	3,625,220	3,172,365	3,137,399	
Non-Member Contributions	0	80,000	0	(
Grant Income	944,468	517,430	373,520	350,000	
Other Income	138,824	162,306		309,137	
Total Revenues	\$6,824,550	\$6,214,122	\$6,530,496	\$7,875,908	
Expenses					
Advertising	\$87,413	\$98,522	\$94,904	\$144,581	
Bad Debt Expense	329,432	(114,134)	18,000	7,200	
Cost of Sales (excluding labor)	213,670	327,065	772,280	1,296,181	
Equipment - Office	79,072	12,562	63,386	26,009	
Equipment - Operating	62,583	12,535	25,706	74,846	
Equipment - Rental/Lease	317,147	184,017	180,969	101,859	
Fringe Benefits	638,061	539,102	572,517	605,503	
Fuel Flowage & FBO Fees	28,075	0	25,498	34,443	
In-Kind Services	76,820	27,720	0		
Insurance	138,572	124,757	96,732	102,256	
Office Supplies	42,199	35,341	39,451	48,778	
Operating Supplies	69,343	31,312	41,693	59,188	
Other	50,500	76,271	41,382	51,469	
Postage and Shipping	9,274	12,296	15,176	24,242	
Printing	29,274	16,842	9,624	15,373	
Professional Services	1,436,642	563,756		746,295	
Repair and Maintenance	378,730	453,408	383,210	361,139	
Salaries and Temporary Labor	2,309,550	2,204,162	2,188,005	2,462,582	
Telephone/Radio	45,763	46,777	87,448	82,290	
Training	17,389	22,543	41,297	46,479	
Travel	49,039	65,706	58,213	81,402	
Utilities	265,550	159,630	184,632	212,777	
Capital Improvements	90,985	14,426	0	,	
Total Expenses	\$6,765,083	\$4,914,616	\$5,507,770	\$5,288,710	
Revenues over (under) Expenses	\$59,467	\$1,299,506	\$1,022,726	\$1,291,017	

Budget basis. This summary is not intended to represent the financial position or results of operations under General Accepting Accounting Principals.

TABLE 6H Cash Flow Analysis			
Cash Flow Amarysis	Short Term	Intermediate Term	Long Term
REVENUES			
Fueling Sales	\$2,808,780	\$4,099,332	\$8,479,920
Fuel Flowage & FBO Fees	31,784	45,369	56,237
Landing Fees (excl. cargo)	876,000	3,130,000	10,245,000
Lease Income (excl. cargo)	2,675,250	3,818,700	4,733,460
Terminal Revenues:			
Terminal Rent	128,000	344,000	805,000
Ground Transportation	42,000	64,000	264,000
Concessions	424,000	723,000	
Parking	572,000	2,199,000	6,436,000
Car Rental	829,000	1,451,000	3,828,000
Contracts & Misc Services	89,866	128,276	159,004
Air Cargo (Leases & Landing Fees)	95,000	286,000	
Tie Down / Hangar Fees	57,000	72,920	72,920
Direct Local Government Contributions	3,153,000	0	0
Other Income	64,339	65,316	67,869
TOTAL REVENUES	\$11,846,018	\$16,426,913	\$39,008,410
COST OF SALES	·		
Cost of Goods Sold re Service Work	\$28,379	\$40,508	\$50,212
Cost of Fueling Sales	1,348,920	1,787,160	3,239,520
Total Cost of Sales (excl. labor)	\$1,377,299	\$1,827,668	\$3,289,732
GROSS MARGIN	\$10,468,720	\$14,599,245	\$35,718,679
EXPENSES			
Advertising	\$274,496	\$500,684	\$1,224,979
Bad Debt Expense	21,773	38,275	87,844
Equipment			
Office Equipment	74,393	101,597	114,531
Operating Equipment	80,501	90,659	117,250
Rental/Lease of Equipment	294,126	294,126	294,126
Fringe Benefits	1,134,205	1,548,949	1,746,147
Fuel	39,900	44,934	58,114
Insurance	154,125	170,125	224,125
Lease Expense (Real Estate)	182,400	182,400	182,400
Office Supplies Software	30,414	41,535	46,823
	39,020	53,289	60,073
Operating Supplies Small Tools	72,716	99,306	111,949
Uniforms	6,306	7,530	9,491
Other	20,130	27,491	30,991
Postage & shipping	122,431	167,200	188,487
Printing	41,065	46,247	59,811
Professional Services:	62,395	70,269	90,879
Accounting	05.000	05.004	05.050
Accounting Consultants	25,889	35,901	85,252
Fire	187,500	187,500	187,500
	806,831	1,199,831	1,199,831
Legal Police	90,000	90,000	90,000
Professional Services - Other	53,000	353,000	353,000
Trofessional Services - Utner	67,420	67,420	67,420

Repairs & Maintenance: Buildings	Short Term	Intermediate	Long
u -			
-		Term	Term
-			2.02.22
	125,330	150,396	150,396
Equipment	198,093	223,089	•
Grounds	52,500	75,000	120,000
Pavements	72,500	87,000	116,000
Salaries	4,088,117	5,583,016	6,293,795
Temporary Labor	40,881	55,830	62,938
Telephone/Radio Communications	130,904	178,772	
Training	131,392	179,438	•
Travel	157,189	214,668	•
Utilities	234,397	351,596	•
Total Expenses before Contingency	\$9,112,341		\$14,660,083
Net Income before Carryforward or	ψο,,,ο x.	VIII	Ψ <u>2</u> 2,000,000
Contingency	\$1,356,379	\$2,082,171	\$21,058,596
CAPITAL IMPROVEMENTS	42,000,000	Ψ=,00=,111	421,000,000
Funding Sources			
Federal Grants	\$8,377,520	\$5,814,864	\$6,061,709
State Grants	411,240	1,466,693	1,122,946
WGAA Matching Requirement	411,240	2,464,343	2,980,046
Adj. WGAA to Portion covered by Member	,	_,,	,,.
Government Contributions	935,760	(2,464,343)	(2,980,046)
Passenger Facility Charges	657,000	1,708,200	•
Entitlements	715,000	1,664,000	•
Total Assumed Sources of Funds	\$11,507,760	\$10,653,757	
Project Costs		+	<u> </u>
Grant Projects	\$9,200,000	\$9,745,900	\$10,164,700
Non-Grant Projects	1,140,000	1,100,000	1,100,000
Total Capital Needs	\$10,340,000	\$10,845,900	
Year's Funding (Shortage)/Surplus			
re: Capital Improvements	1,167,760	(192,143)	2,723,454
Cumulative Funding (Shortage)/Surplus		,	
re: Capital Improvements	(2,830,510)	(25,981,079)	(6,804,136)
Year's Funding (Shortage) Surplus	, , , , , , , , , , , , , , , , , , , ,		
re: Operating Budget	1,356,379	2,082,171	21,058,596
Cumulative Funding (Shortage) Surplus			
re: Operating Budget	4,462,334	16,220,831	140,424,940
Year's Total Funding (Shortage) Surplus			
(Operating + Capital)	2,524,139	1,890,028	23,782,050
Cumulative Total Funding (Shortage) Surplus			
(Operating + Capital)	\$1,631,824	(\$9,760,248)	\$133,620,804

Source: Williams Gateway Airport Authority

Notes:

Assumptions detailed in Appendix D

Totals shown are before debt service and repayment of Member Government Contributions.

WGAA - Williams Gateway Airport Authority

Short-Term - Year 2005 of 20-year cash flow projection

Intermediate Term - Year 2010 of 20-year cash flow projection

Long Term - Year 2020 of 20-year cash flow projection

As evidenced in the table, while substantial new revenue should be generated through the establishment of commercial passenger service and air cargo activities at the airport, operating revenues during the short term planning period is not expected to cover operating expenses. Therefore, it may be necessary for the community members of the WGAA to continue their annual subsidy to the WGAA.

The second portion of the Cash Flow Analysis examines the funding of the recommended capital improvement program. This portion of the analysis compares the annual improvement funding needs against capital improvement funding sources, entitlement, PFC, and grant funding) to assess the ability of the WGAA to fund the local share of the improvements.

As shown in the analysis, passenger service activities can contribute substantially to the implementation of the airport development program. For example, once the airport establishes commercial passenger service and enplanes more than 10,000 passengers annually, the airport qualifies for entitlement funding. As discussed previously, this can potentially total over \$715,000 annually at 250,000 enplanements. This can increase to more than \$1.5 million annually should airport enplane 2 million passengers annually. Passenger facility charges (PFCs) can also contribute to airport development funding. As shown, in the table, the airport can potentially derive as much as \$5.2 million dollars annually from PFC revenues. Combined, entitlements and PFCs, can contribute more than \$1.3

million dollars annually to airport development funding in the short term planning horizon, \$3.3 million in the intermediate term planning horizon, and \$6.7 million in the long term planning horizon. (Long term planning horizon entitlements were reduced in accordance with federal legislation that requires medium and large hub airports to forgo 50 percent of their entitlements when collecting a PFC. Under current guidelines, Williams Gateway Airport is expected to qualify as a medium hub airport at the end of the long term planning horizon).

During the early portions of the planning period, even with added entitlement and PFC revenues, there are expected to be annual capital improvement funding shortfalls. The implementation of the development program will be dependent upon Federal discretionary funding to ensure that the airport development program is implemented in a timely manner. There is no guarantee of receiving adequate funding for the projects as scheduled. If adequate funding cannot be obtained, the choices will either be to finance the project through local resources or to delay the implementation of the project.

SUMMARY

The best means of beginning the implementation of recommendations of this master plan is to first recognize that planning is a continuous process that does not end with completion of the master plan. Rather, the ability to continuously monitor the existing and forecast status of airport activity must

be provided and maintained. The basic issues upon which this master plan is based will remain valid for several years. As such, the primary goal is for the airport to evolve into a facility that will best serve the air transportation needs of the region and to evolve into a self-supporting economic generator for the southeast valley.

In this master plan, focusing on the timing of airport improvements was necessary. However, the actual need for facilities is more appropriately established by airport activity levels rather than a specified date. example, projections have been made as to when additional T-hangar facilities would be needed to accommodate based aircraft growth. However, in reality, the time frame in which additional facilities needed mav are substantially different. Actual demand may be slow in reaching forecast activity levels. On the other hand, increased based aircraft totals may establish the need for new facilities much sooner. Although every effort has been made in this master planning process to conservatively estimate when facility development may be needed, aviation demand will dictate when facility improvements need to be accelerated or delayed.

The real value of a usable master plan is that it keeps the issues and objectives in the mind of the user so that he or she is better able to recognize change and its effect. In addition to adjustments in aviation demand, decisions made as to when to undertake recommended improvements in this master plan will impact the period that the plan remains valid. The format used in this plan is intended to reduce the need for costly updates. Updating can be done by the user, improving the plan's effectiveness.

In summary, the planning process requires the WGAA to consistently monitor the progress of the airport in terms of total aircraft operations, total based aircraft, and overall aviation activity. Analysis of aircraft demand is critical to the exact timing and need for new airport facilities. The information obtained from continually monitoring airport activity will provide the data necessary to determine if the development schedule should be accelerated or delayed.